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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/762,568

01/23/2004

Gert-Jan Heerens

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09/01/2005

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EXAMINER

NGUYEN, HUNG

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 09/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/762,568

Applicant(s)

HEERENS ET AL.

Examiner

Hung Henry V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 26, 2005 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi (U.S.Pat. 6,842,221) in view of Yamamoto (U.S 2004/0150823 A1).

With respect to claims 1-21, Shiraishi (figure 1) discloses an exposure apparatus comprising substantially all of the limitations of the instant claim such as: a patterning device (R) configured to impart a beam of radiation (EL) with a desired pattern in its cross-section, the patterning device being supported by a support structure (14); a projection system (PL) configured to project the patterned beam onto a target portion of a substrate (W); a conditioned chamber (15) that houses the supporting structure; an actuator (see col.24, lines 24-34) configured to introduce the patterning device (R) into the conditioned chamber (15) and an

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alignment system disposed outside the conditioned chamber (15), to align the patterning device with the projected beam of radiation (see col.38, lines 47-50). Shiraishi further teaches the actuator includes an actuator arm having a carrier structures for supporting and moving the patterning device (R) from the alignment system to the support structure (see col.24, lines 24-34) and the carrier structure is provided with fixation device configured to secure the patterning device to the carrier structure and a docking system is provided to dock the carrier structure (see figure 9). Moreover, Shiraishi teaches the conditioned chamber comprising a reduced pressure environment (see col.25, lines 30-63) and a reduced particle concentration environment (see col.35, lines 5-11). Shiraishi does not expressly disclose “determining position and orientation of the reticle relative to a reference point on a carrier structure that supports the reticle during the introduction of the reticle into the conditioned chamber and adjusting the position and orientation of the reticle in accordance with the reference point. Yamamoto discloses an exposure apparatus having an alignment system (33, 34 and 40) for aligning the reticle (5) with the projected patterned beam of radiation by determining position and orientation of the reticle relative to a reference point (3) on a carrier structure (2) that supports the reticle (5) during the introduction of the reticle into exposure station and adjusting the position and orientation of the reticle based on the reference point/pin (3). In view of such teachings, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Shiraishi and Yamamoto to obtain the invention as specified in the above-mentioned claims. It would have been obvious to a skilled artisan to employ the alignment system of Yamamoto into the lithographic apparatus of Shiraishi for the purpose of pre-alignment of the reticle with respect to

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the transporting device during the introduction of the reticle into the chamber and thus a high accurate alignment of the reticle to the stage chamber can be obtained.


***Response to Amendment/Argument***

4. Applicant's amendment filed July 5, 2005 has been entered. Applicant's arguments with respect to prior art rejections have been carefully reviewed but have been traversed in view of new ground of rejection as set forth above.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Henry V. Nguyen whose telephone number is 571-272-2124. The examiner can normally be reached on Monday-Friday (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Hung Henry V Nguyen**  
**Primary Examiner**  
**Art Unit 2851**

hvn  
8/28/05